

Application No.: 10/786,469
Amendment under 37 CFR 1.111
Reply to Office Action dated May 3, 2007
August 3, 2007

REMARKS

By this amendment, claims 19, 24-27, 28-30, 32 and 34-36 have been amended and new claims 37-38 have been added in the application. Currently, claims 19-38 are pending in the application.

The indication that claims 27-29 and 35-36 contain allowable subject matter is noted with appreciation.

Claims 19-25 and 30-34 were rejected under 35 USC 102(b) as being anticipated by Felton et al. (U.S. Patent No. 6,207,874). Claim 26 was rejected under 35 USC 103(a) as being obvious over Felton et al. in view of Pruche et al. (U.S. Patent Application Publication No. 2003/0065523).

These rejections are respectfully traversed in view of the following remarks.

The present invention relates to a method and apparatus for making a determination of characteristics of skin based on measured values in connection with the application of tattooing or permanent make-up to the skin (see page 1, lines 4-8 of the specification).

Fig. 1 shows a light source 1 for generating light rays 2 with which to irradiate a test sector 3 of skin 4. In the test

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sector 3, the incident light rays 2 at least are partly reflected, absorbed, and/or dispersed, and/or cause emission light whereby test light rays 5 are produced that are detected by a detector 6 (see page 5, lines 19-24 of the specification).

A comparison of an irradiation intensity EI of light rays (first electronic value) and an intensity RI of reflected test light rays (second electronic value) in different spectral regions, therefore, can provide information on the pigmentation of the skin 4 in the test sector 3. The electronic processing device 7 automatically processes electrical test values of the irradiation intensity EI and the intensity of the test light rays 5 for automatic determination of a measured value of a skin characteristic (see page 6, lines 19-26 of the specification).

The characteristic of the skin 4 under examination thus found out, will be used especially for having the electronic processing device 7 automatically determine a chromaticity value FW and/or a skin type HT for tattooing or application of permanent make-up (see page 6, line 33 - page 7, line 2).

The chromaticity value FW is output as electronic information by an output device 8 which may be embodied by a display or loudspeaker, for example, and which either may be integrated in the electronic processing device 7 or be provided

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outside of the same (see page 7, lines 23-26 of the specification).

Independent claim 19 recites a method of determining a value of a skin characteristic, especially of a type of skin, for the application of permanent make-up or tattooing to the skin, the method comprising the steps of "generating light rays by a light source; irradiating a test sector of a skin, to which tattooing or permanent make-up is to be applied by color, with the light rays; measuring test light rays formed in the test sector by irradiation with the light rays, by a detector to generate measured electrical test light values of the test light rays; processing the measured electrical values by an electronic processing device to determine a characteristic value which is a measure of a characteristic of the skin in the test sector and which is to be taken into account when applying permanent make-up or tattooing to the skin; and outputting the characteristic value via an output device".

Also, independent claim 30 recites "an apparatus for determining a characteristic value of a skin, especially of a type of skin, for the application of permanent make-up or tattooing to the skin, comprising: a light source for generating light rays; a detector for detecting test light rays which are

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formed by irradiation of a test sector of the skin with the light rays so as to generate respective measured electrical test light values of the test light rays in a plurality of optical spectral regions; an electronic processing device for automatic processing of the measured test light values to determine a characteristic value which is a measure of a characteristic of the skin in the test sector and which is to be taken into account when applying permanent make-up or tattooing to the skin; and an output device for outputting the characteristic value". These features are not shown or suggested by Felton et al., Pruche et al. or the combination of these references.

Felton et al. relate to a method of creating a photorealistic temporary tattoo 30 that matches the skin tone, size and shape of a part of person's body (see col. 4, lines 41-43).

Felton et al. disclose the steps of: taking photographs of various different body parts to create a stock sample or photographing a particular area on an individual patient to create a customized tattoo, developing the photographic film, scanning the photographs onto a computer to produce a digital image, producing an exact line drawing of the image, printing a corresponding line drawing on the reverse side of the temporary

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tattoo for alignment, and finally printing the digital image on the front side of the temporary tattoo (see col. 4, lines 47-56).

Applicant respectfully submits that Felton et al. do not disclose a method of determining a value of a skin characteristic as claimed in the present invention. In the presently claimed invention, light is irradiated on a skin and the reflected light is analyzed in order to generate a measured value to determine the characteristic skin value, e.g. a chromaticity value of the skin, the chromaticity value of the skin being composed by the color of the pigments laying under the epidermis and the color of the epidermis itself.

On the other hand, Felton et al. disclose a method of making a cosmetic temporary tattoo. Specifically, in Felton et al., pictures of a body part are taken prior to the amputation of the body part. On the basis of these pictures a cosmetic temporary tattoo is made. The tattoo is then applied on the skin of the patient in order to cover the cicatrice until a permanent prosthesis can be applied to the patient. The cosmetic temporary tattoo can also be used to cover other skin defects, e.g. freckles or acne (see col. 4, lines 41-49, col. 5, lines 7-11, col. 6, lines 15-31). Felton et al. do not reflect any light rays of particular values on to the skin and do not measure the

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value of the reflected light rays to determine a value of the characteristic of the skin. Therefore, applicant respectfully submits that the method and the apparatus disclosed in the present invention are different from Felton et al.

Felton et al. do not disclose the steps of generating light rays by a light source; irradiating a test sector of a skin, to which tattooing or permanent make-up is to be applied by color, with the light rays; measuring test light rays formed in the test sector by irradiation with the light rays, by a detector to generate measured electrical test light values of the test light rays; processing the measured electrical values by an electronic processing device to determine a characteristic value which is a measure of a characteristic of the skin in the test sector and which is to be taken into account when applying permanent make-up or tattooing to the skin; and outputting the characteristic value via an output device as claimed in independent claim 19.

Also, Felton et al. do not disclose a light source for generating light rays; a detector for detecting test light rays which are formed by irradiation of a test sector of the skin with the light rays so as to generate respective measured electrical test light values of the test light rays in a plurality of optical spectral regions; an electronic processing device for

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automatic processing of the measured test light values to determine a characteristic value which is a measure of a characteristic of the skin in the test sector and which is to be taken into account when applying permanent make-up or tattooing to the skin; and an output device for outputting the characteristic value as claimed in independent claim 30.

For these reasons, it is believed that Felton et al. do not show or suggest the presently claimed features of the present invention. Applicant also submits that Pruche et al. do not make up for the deficiencies in Felton et al.

Pruche et al. relate to methods, combinations, apparatus, systems and articles of manufacture for gauging the progress of a beauty treatment regimen. This may have particular use with treatment where initial indicia of progress are subtle or are otherwise imperceptible to a typical user (see page 1, paragraph [0002]).

Pruche et al. do not disclose a method of determining a value of a skin characteristic, especially of a type of skin, for the application of permanent make-up or tattooing to the skin, the method comprising the steps of generating light rays by a light source; irradiating a test sector of a skin, to which tattooing or permanent make-up is to be applied by color, with

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the light rays; measuring test light rays formed in the test sector by irradiation with the light rays, by a detector to generate measured electrical test light values of the test light rays; processing the measured electrical values by an electronic processing device to determine a characteristic value which is a measure of a characteristic of the skin in the test sector and which is to be taken into account when applying permanent make-up or tattooing to the skin; and outputting the characteristic value via an output device as claimed in independent claim 19.

Also, Pruche et al. do not disclose an apparatus for determining a characteristic value of a skin, especially of a type of skin, for the application of permanent make-up or tattooing to the skin, comprising: a light source for generating light rays; a detector for detecting test light rays which are formed by irradiation of a test sector of the skin with the light rays so as to generate respective measured electrical test light values of the test light rays in a plurality of optical spectral regions; an electronic processing device for automatic processing of the measured test light values to determine a characteristic value which is a measure of a characteristic of the skin in the test sector and which is to be taken into account when applying permanent make-up or tattooing to the skin; and an output device

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for outputting the characteristic value as claimed in independent claim 30.

It is therefore respectfully submitted that Felton et al., Pruche et al., individually or in combination, do not teach, disclose or suggest the presently claimed invention and it would not have been obvious to one of ordinary skill in the art to combine these references to render the present claims obvious.

New independent claim 37 has been added in the application. The present invention discloses that electronic information on the irradiation intensity EI of the light source 1 is supplied to an electrical processing device 7. Also, the present invention discloses that the electronic processing device 7 automatically processes a first electrical value of the irradiation intensity EI and a second electrical value of the intensity of the test light rays RI for automatic determination of a measured value of a skin characteristic (see page 6, lines 24-26 of the specification).

In view of the above described features, new independent claim 37 recites the step of "generating light rays having a first electronic value of an irradiation intensity by a light source". Also, independent claim 37 recites the steps of "measuring test light rays formed in the test sector by irradiation with the light rays, by a detector to generate a second electrical value of an

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intensity of the test light rays; processing the first electrical value of the irradiation intensity and the second electrical value of the intensity of the test light rays by an electronic processing means to determine a characteristic value which is a measure of a characteristic of the skin in the test sector and which is to be taken into account when applying permanent make-up or tattooing to the skin". Applicant respectfully submits that these features claimed in new claim 37 also define over Felton et al., Pruche et al. and the other prior art of record.

New dependent claim 38, which directly depends from new independent claim 37, has been added in the application. The present invention discloses that a comparison of the irradiation intensity EI of light rays and the intensity RI of the reflected test light rays, therefore, can provide information on the pigmentation of the skin 4 in the test sector 3 (see page 6, lines 19-22 of the specification).

In view of the above described features, new dependent claim 38 recites "said step of processing includes comparing the first electrical value of the irradiation intensity and the second electrical value of the intensity of the test light rays to provide information on a pigmentation of the skin in the test sector". Applicant respectfully submits that these features

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claimed in new claim 38 also define over Felton et al., Pruche et al. and the other prior art of record. Allowance of these claims is also respectfully requested.

In view of foregoing claim amendments and remarks, it is respectfully submitted that the application is now in condition for allowance and an action to this effect is respectfully requested.

If there are any questions or concerns regarding this amendment or the remarks, the Examiner is requested to telephone the undersigned at the telephone number listed below.

Respectfully submitted,

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